

Additional Notes on *Tecomanthe speciosa* W. R. B. Oliver (Bignoniaceae) from the Three Kings Islands, New Zealand

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ABSTRACT.

Observations on flowers, fruit, seed, and germination of *T. speciosa* are recorded. The fruit has not been described previously.

When the late Dr. W. R. B. Oliver described *T. speciosa* in 1948 he had not seen seed, but forecast that in common with other members of the genus they would be winged. Fruit has now been obtained from a plant growing under cultivation. The object of this note is to describe the fruit and give additional information about a specimen growing at Plant Diseases Division, Mount Albert.

The plant was propagated from material brought back by Professor Baylis in 1951. Planted out during 1952 it flowered in May 1954. The period of flowering lasts until late July or early August, inflorescences tending to develop on the younger wood towards the end of the flowering season, as distinct from the cauliflory common at the beginning. Hand pollination was practised towards the end of the first flowering season and during that of 1955 and 1956, but it was not until July 1956 that fertilization was obtained and five fruits set. The development of fruits by December 1956 is shown in Fig. 1. The capsules took eight months to mature, and the following description has been prepared by Dr. R. C. Cooper, Botanist to the Museum.

"The fruit is a siliquiform capsule (opening by two valves which split from below upwards). (Fig. 2.) The valves are oblong, acuminate, 16.7 cm. long, 3.3 cm. broad (in the specimen examined), slightly curved, smooth, dark green without, light yellow ochre within, woody. The vertical septum, attached to the centre of each boat-shaped valve until dehiscence, is broad and thickened and carries many densely-packed seeds. The seeds are heart-shaped, flattened, with wings extended laterally. 253 seeds were formed in the specimen examined. In a number the cotyledons had developed sufficiently to tear the seed-coat and extended beyond it. The fruit examined was grown by Mr. J. Hunter at the Plant Diseases Division of the Department of Scientific and Industrial Research, Mount Albert, New Zealand (Auck. Herb. No. 47770). There seems to be little known regarding the fruit of *Tecomanthe*, and most of the species are based on flowering specimens. In the only descriptions of fruiting specimens that I have seen, the measurements are smaller than those given above for the capsule of *Tecomanthe speciosa* (i.e. *T. nitida* is only 14 cm. long, *T. hillii* 3.75 cm.)."

Fig. 2 depicts two capsules. In one the manner of dehiscence is illustrated, in the other the contents are shown. Two seeds have been removed to show their details.

Seed sown on 28/3/57 germinated in fourteen days producing seedlings with kidney-shaped cotyledons. Later the first ovate, simple, coarsely serrate seedling leaves developed. These are quite distinct from the compound leaves of the mature plant. Fig. 3 illustrates a seedling 18 days after germination. The shape of cotyledons and first seedling leaves is clearly shown, as also is the persistent winged seed-coat at soil level.

Dr. Oliver stated that there are 4 stamens and a short staminodium in the flower. This has been reported by several authors as a common feature of Bignoniaceae. Fig. 4, however, shows a range in *T. speciosa* from the usual short staminodium to a fifth stamen. All intermediate stages between these extremes occur although the staminodial condition is most common.

In Fig. 5 the usual form of the style is illustrated. Rarely is the style straight and there may be some relation between the irregularity shown and the rare occurrence of fruit.

REFERENCES.

- OLIVER, W. R. B., 1948. Flora of the Three Kings. *Rec. Auck. Inst. Mus.* 3(4-5) :211-238.



Fig. 1. Fruit of *Tecomanthe speciosa* W. R. B. Oliver.

Fig. 2. Capsule of *Tecomanthe speciosa*, half natural size.



Fig. 3. Seedling of *Tecomanthe speciosa*.

Fig. 4. Staminodial variation of *Tecomanthe speciosa*.

Fig. 5. Bisected flower of *Tecomanthe speciosa*.

Further explanation in text.